

SEQUENCE LISTING

<110> Huang, Ziwei

<120> A novel peptide antagonist of CXCR4 derived from the
N-terminus of viral chemokine vMIP-II

<130> CXCR4 Peptide Antagonist Prov.

<140>

<141>

<160> 33

<170> PatentIn Ver. 2.1

<210> 1

<211> 71

<212> PRT

<213> Herpesvirus

<400> 1

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro Gln Val Leu Leu Ser Ser Trp Tyr Pro Thr Ser
20 25 30

Gln Leu Cys Ser Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Gly Arg
35 40 45

Gln Val Cys Ala Asp Lys Ser Lys Asp Trp Val Lys Lys Leu Met Gln
50 55 60

Gln Leu Pro Val Thr Ala Arg
65 70

<210> 2

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 2

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
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<210> 3

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 3

His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln Lys Arg
1 5 10

<210> 4

<211> 10

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 4

Leu Gly Ala Ser Trp His Arg Pro Asp Lys
1 5 10

<210> 5

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 5

Leu Gly Tyr Gln Lys Arg Pro Leu Pro Gln Val Leu Leu Ser Ser Trp
1 5 10 15

Tyr Pro Thr Ser Gln Leu
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<210> 6
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 6
Lys Pro Val Ser His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln Lys
1 5 10 15

Arg Pro Leu Pro
20

<210> 7
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 7
Gln Val Leu Leu Ser Ser Trp Tyr Pro Thr Ser Gln Leu Cys Ser Lys
1 5 10 15

Pro Gly Val Ile Phe Leu Thr
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<210> 8
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 8

Ser Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Gly Arg Gln Val Cys
1 5 10 15

Ala Asp Lys Ser Lys Asp
20

<210> 9

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 9

Ala Asp Lys Ser Lys Asp Trp Val Lys Lys Leu Met Gln Gln Leu Pro
1 5 10 15

Val Thr Ala Arg
20

<210> 10

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 10

Cys Thr Ser Gln Leu Ala Ser Lys Pro Gly Cys
1 5 10

<210> 11

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 11

Cys Phe Leu Thr Lys Arg Gly Arg Gln Val Cys
1 5 10

<210> 12
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<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 12
Leu Gly Ala Ser Trp His Arg Pro Asp Lys Ala Ala Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 13
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<212> PRT
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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 13
Ala Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 14
<211> 21
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 14

Leu Gly Ala Ser Ala His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 15

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 15

Leu Gly Ala Ser Trp His Ala Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 16

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 16

Leu Gly Ala Ser Trp His Arg Pro Asp Ala Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
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<210> 17

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: vMIP-II

derived peptide

<400> 17

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Ala Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
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<210> 18

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 18

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Ala
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 19

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 19

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Ala Pro Leu Pro
20

<210> 20

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 20

Pro Leu Pro Arg Lys Gln Tyr Gly Leu Cys Cys Lys Asp Pro Arg His
1 5 10 15

Trp Ser Ala Gly Leu
20

<210> 21

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<221> VARIANT

<222> (1)..(21)

<223> all amino acids in this peptide fragement are
D-amino acids

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 21

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 22

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<221> VARIANT

<222> (1)..(21)

<223> all amino acids in this peptide are D-amino acids

<220>

<223> Description of Artificial Sequence: vMIP-II

derived peptide

<400> 22

Pro Leu Pro Arg Lys Gln Tyr Gly Leu Cys Cys Lys Asp Pro Arg His
1 5 10 15

Trp Ser Ala Gly Leu
20

<210> 23

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<221> VARIANT

<222> (1)..(10)

<223> amino acids residues #1 through #10 are D-amino
acids, the remaining residues are L-amino acids

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 23

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
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<210> 24

<211> 21

<212> PRT

<213> Artificial Sequence

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<221> UNSURE

<222> (11)..(21)

<223> amino acids #11 through #21 are D-amino acids,
#1-10 are L-amino acids

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 24

Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 25

<211> 21

<212> PRT

<213> Artificial Sequence

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<221> VARIANT

<222> (1)..(21)

<223> all amino acids are D-amino acids

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 25

Ala Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
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<210> 26

<211> 21

<212> PRT

<213> Artificial Sequence

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<221> VARIANT

<222> (1)..(21)

<223> all amino acids are D-amino acids

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<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 26

Leu Gly Ala Ser Ala His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro

20

<210> 27

<211> 21

<212> PRT

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<222> (1)..(21)

<223> all amino acids are D-amino acids

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 27

Leu Gly Ala Ser Trp His Ala Pro Asp Lys Cys Cys Leu Gly Tyr Gln

1

5

10

15

Lys Arg Pro Leu Pro

20

<210> 28

<211> 21

<212> PRT

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<221> VARIANT

<222> (1)..(21)

<223> all amino acids are D-amino acids

<220>

<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 28

Leu Gly Ala Ser Trp His Arg Pro Asp Ala Cys Cys Leu Gly Tyr Gln

1

5

10

15

Lys Arg Pro Leu Pro

20

<210> 29
<211> 21
<212> PRT
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<222> (1)..(21)
<223> all amino acids are D-amino acids

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 29
Leu Gly Ala Ser Trp His Arg Pro Asp Lys Ala Cys Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 30
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<220>
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<222> (1)..(21)
<223> all amino acids are D-amino acids

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 30
Leu Gly Ala Ser Trp His Arg Pro Asp Lys Cys Cys Leu Gly Tyr Ala
1 5 10 15

Lys Arg Pro Leu Pro
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<210> 31
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<222> (1)..(21)
<223> all amino acids are D-amino acids

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 31
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1 5 10 15

Lys Ala Pro Leu Pro
20

<210> 32
<211> 21
<212> PRT
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<222> (1)..(21)
<223> all amino acids are D-amino acids

<220>
<223> Description of Artificial Sequence: vMIP-II
derived peptide

<400> 32
Leu Gly Ala Ser Trp His Arg Pro Asp Lys Ala Ala Leu Gly Tyr Gln
1 5 10 15

Lys Arg Pro Leu Pro
20

<210> 33
<211> 10
<212> PRT
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<222> (1)..(10)